

Technology in the Palmetto State

South Carolina
Statewide
Strategic
Information
Technology Plan



Education and Training



Collaboration



Service Delivery



Business Intelligence

Acknowledgements

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Executive Summary

For many years, leaders in South Carolina have sought to maximize the impact of information technology (IT) spending by state agencies. The challenge has been to avoid duplication and to achieve economies of scale by centralizing the state's technology infrastructure while also allowing agencies to obtain the specific tools they need to meet their special needs.

Beginning in the 1980s, a state information technology division was established within the Budget and Control Board to provide certain services and to coordinate a statewide IT approach. However, in 2007, the Governor's Government Efficiency and Accountability Review Report (GEAR) and the subsequent legislative Joint Committee on Government Accountability and Oversight (JCGAO) found problems with that approach.

The Joint Committee report stated:

"The Division of the CIO faces a uniquely difficult task because it fills the role of regulator in setting statewide standards, service provider for the numerous state agencies that utilize its service, and advocate on behalf of the state agencies it serves. In addition, the technology used for information management changes rapidly.....Further, the Joint Committee endorses a more collaborative model of interaction with the addition of more formal legislative

oversight of these information management processes."

"Because the arena of information technology can be complicated, the General Assembly should consider fostering specialized expertise from within its ranks to oversee the information technology efforts within the executive branch of government. This may be accomplished through the creation of a joint committee for information technology oversight or standing subcommittees within the existing standing committee structure."

As a result, a proviso was passed in the 2008-09 Appropriations Act which created the Joint Strategic Technology Committee (JSTC) and the Agency Director Technology Advisory Committee (ADTAC). The ADTAC will provide input and advice regarding the Statewide Strategic Information Technology Plan and the JSTC will review the plan.

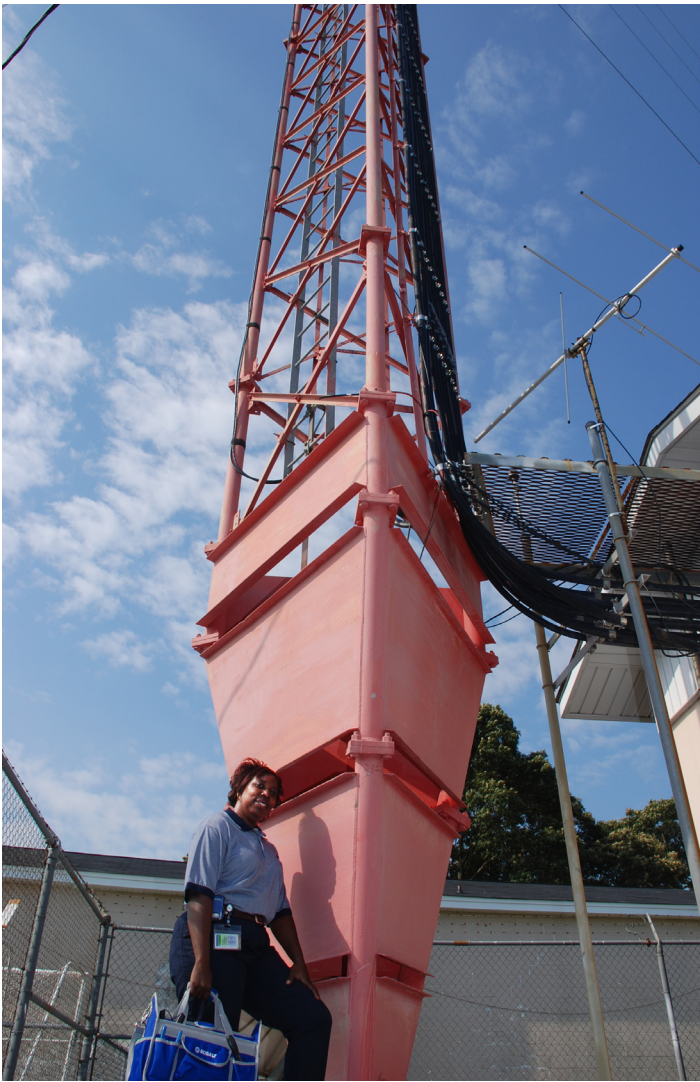
At the same time, the Budget and Control Board was working to transform its approach to the IT community. The Division of the Chief Information Officer was renamed the Division of State Information Technology and refocused its efforts on becoming equal partners with its customer agencies. The goal is to create a consensus model for how South Carolina can maximize the use of technology to improve government.

Under the direction of the new ADTAC, working groups of IT professionals came together to formulate the strategic IT plan. The work began with consideration of the business goals and challenges the state is facing and then analysis of how technology might help address those challenges.

The South Carolina Statewide Strategic Information Technology Plan is the culmination of a collaborative effort spanning seven months with active participation of more than 50 agencies. This effort built upon focused discussions and consensus-oriented decision-making to recommend



Department of Health and Environmental Control's Bureau of Laboratories staff members perform tests to protect the health of the public and the environment. Photo by Deborah Farr.



Tracy Rivera with the Budget and Control Board's Division of State Information Technology.

ways to improve the use of technology for the benefit of the state's citizens. The document outlines a 36-month roadmap and a discrete and actionable high-level project plan to achieve the vision.

Underlying all these areas is a strong belief in the concept of "Centers of Excellence." This means that agencies that have already developed IT capabilities in certain areas should be encouraged to serve as leaders and expand their services to other entities, as opposed to other agencies being required to develop their capabilities from scratch. Implicit in this approach is the idea that some agencies outside the Board's Division of State Information Technology may take the lead in certain specialties.

This document summarizes the seven business goals: improve education; improve public health; sustain/enhance quality of life and strengthen families; accelerate economic development; transform government through services; enhance public safety and law enforcement; and strengthen the state's infrastructure. It then describes the four enabling IT capabilities, objectives, and recommended supporting initiatives that support those business goals of the Statewide Strategic Information Technology Plan. Several ongoing programs are also highlighted, showcasing the efforts South Carolina has already made in fostering a collaborative technology environment.

The plan calls for the State to develop its capabilities in four key areas:

- **Collaboration:** When possible, the state should use flexible technology that can be deployed in multiple agencies to save money and minimize incompatibility between IT systems.
- **Service Delivery:** New technologies allow the public sector to deliver more services with fewer people and allow citizens the capability to get what they need without having to visit a government office in person.
- **Business Intelligence:** State government has an incredible amount of financial, statistical and social data that together can be a powerful tool to help elected officials and agency leaders craft public policy.
- **Education and Training:** More tailored online educational offerings can be offered for public education and for public employee training.

Introduction

The State of South Carolina is committed to building a better future for its citizenry by providing efficient and effective services that ensure a globally competitive environment for economic development and a high quality of life. South Carolina's investment in information technology will play a critical role in reaching these goals.

Moreover, the state and the nation are facing unprecedented challenges, such as: severely reduced revenues due to the worldwide economic downturn, the loss of potentially irreplaceable knowledge as the workforce ages, the rising cost of operations and increases in demands. These circumstances have accelerated the expectations of policy makers and agency heads that the IT community must eliminate redundancies, replace inefficient processes, and reduce overall service delivery costs through targeted innovation, proven best practices and leveraged centers of excellence.

To that end, the State of South Carolina offers this Statewide Strategic Information Technology Plan. It offers technology direction in direct support to the state's business directives and is intended to maximize the state's IT investment.

Scope

Having acknowledged IT as an enabler of state agencies' core missions, South Carolina is embarking on a multi-year Statewide Strategic Information Plan to assist in the achievement of business-oriented goals specifically aligned with citizens' interests. The scope of this plan addresses the actionable principles governing the conduct of IT activities throughout South Carolina state government.

Mission Statement

To maximize the delivery of consistent, cost-effective, interoperable, reliable, accessible and secure IT solutions that enable, enhance and sustain the business objectives of state government for the benefit of South Carolina citizens, its business communities and its public sector agencies.

Vision

To provide leadership, organizational structures, policies, standards, architecture, information and processes that facilitate the development of a coordinated and cooperative statewide cross-agency approach to the prioritization and implementation of IT investments that deliver high quality, efficient services for South Carolina citizens and constituents.

Guiding Principles

The following guiding principles are used to inform and shape IT decision-making by stakeholders:

- Use IT to bridge the gap between citizens, business and state government. That is, promote citizen- and business-centric solutions that support accessibility, accountability and open government.
- Make IT a key element of business strategy, but ensure that it is a business-driven, and not a technology-driven activity.
- Leverage existing investments in systems, data, software, hardware and other IT infrastructure.
- Exploit knowledge sharing, efficiencies and cost-effectiveness through reusable projects, programs, applications, common best practices, and Centers of Excellence (CoE).
- Consider data a strategic enterprise resource, using common data repositories and data definitions to advance inter-agency synergies, information sharing and the elimination of information silos.
- Address security and confidentiality as overriding priorities at every stage of development and deployment. Protect IT assets by instituting security standards and procedures to ensure compliance and reduce exposure.
- Establish a cooperative technology governance structure that will align IT assets to a common architecture to increase collaboration, decrease costs and position South Carolina to exploit emerging technologies.
- Recruit, retain and invest in a highly skilled workforce that can respond rapidly to changes in technology and changing business priorities.
- Deliver IT solutions and infrastructure to all state agencies - such as multipurpose telecommunications networks and Enterprise Resource Planning (ERP).

Our Approach

Approach and Planning Process

Information Technology has been an area of statewide focus for more than a decade. A recent example of this type of effort is the state's legislatively backed statewide implementation of a common Enterprise Resource Planning (ERP) system that will maximize the state's investment in accounting, purchasing and human resource management best practices.

Building on the success of this collaborative enterprise approach, the South Carolina General Assembly has authorized the formation of two groups through Proviso 70.28 (see appendix A) of the FY 2008-2009 Appropriations Act: the Joint Strategic Technology Committee (JSTC) and the Agency Directors Technology Advisory Committee (ADTAC).

In general, the ADTAC is responsible for overseeing an on-going strategic planning process and creating a comprehensive multi-year statewide strategic IT plan that supports the state's identified business priorities and citizen interests through shared IT initiatives. In turn, the JSTC is responsible for acting upon the recommendations contained in the plan through prioritization and funding, when appropriate, of enterprise IT projects. In addition, the JSTC is responsible for conducting a comprehensive review of all existing policies and statutes related to the management and use of IT by state government for the expressed goal of fostering collaboration among state

government services providers and between state government and the private sector.

Building On A Strong Foundation

The Statewide Strategic IT Plan is the culmination of a collaborative effort spanning seven months of active participation of more than 50 agencies, using focused discussions and consensus-oriented workshops to drive recommendations on the use of technology to maximize the state's efforts. This planning process began with an IT Capability Assessment to determine a baseline of how technology was currently being used by the state. To frame the baseline assessment, the evaluators used a common capabilities vocabulary and a comprehensive set of IT program categories and strategic goals. The four strategic goals used are listed below in order from the most basic to the most sophisticated:

1. Stabilizing IT operations
2. Building enabling IT infrastructures
3. Implementing enterprise-wide applications
4. Integrating enterprise-wide services and information

Once a robust picture of technology use and business alignment had been developed, a path was crafted to bring agencies together to formulate how technology could be leveraged in

the future. To achieve its goals, the state embarked on a collaborative planning effort, beginning with state agency leaders. This top-down model was designed to ensure a business-centric planning approach and to align and make the most of common agency goals and challenges.

Business Goals and Challenges

Agency Directors and key stakeholders from law enforcement, education, social services, economic development and public safety gave generously of their time and expertise to identify the following business goals that matter most to South Carolina's success:



South Carolina Enterprise Information System training is available for all agencies.

- **Goal 1** – Improve Education: Access, Funding and Quality
- **Goal 2** – Improve Public Health: Access, Prevention and Practitioners
- **Goal 3** – Sustain/Enhance Quality of Life and Strengthen Families: Public Transportation, Environment, Community, Education and Array of Services Offered
- **Goal 4** – Accelerate Economic Development: Jobs, Workforce Planning, Infrastructure
- **Goal 5** – Transform Government through Services: Improve Efficiency, Access, Response and Collaboration
- **Goal 6** – Enhance Public Safety and Law Enforcement: Inter-entity Cooperation, Prevention, Rehabilitation and Population
- **Goal 7** – Strengthen State Infrastructure: Telecommunications, Transportation Networks and Utility Framework (energy grid, water, sewer)

Technology Enabled Capabilities

The State, through its Agency Directors Technology Advisory Committee (ADTAC), facilitated discussions between its agency and IT directors to identify and define specific capabilities that could be used to mitigate any recognized challenges and to accomplish the state's business-centric goals. More than 50 agencies were represented by more than 100 directors, chiefs of staff and IT leads who collaborated in the process to identify the four (4) key technology-enabled capabilities that will help drive the state's business priorities:

Technology Enabled Capabilities

Collaboration – Operate an efficient and effective government based on high levels of trust, functional standardization, common technical services, and shared information.

Service Delivery – Provide a multi-channel suite of government services that are accessible, available, responsive, secure, and affordable with a trail of accountability.

Business Intelligence – Enable state and regional planning based on root cause and trend analysis, and enable predictive capabilities, allowing programs to be designed, evaluated, and measured within a trusted and shared information environment.

Education & Training – Enable an environment with the disposition of improving knowledge, skills, and abilities [KSA] of citizens and employees.

Aligning IT through Objectives, Targets and Metrics

The transition from business-centric capabilities to technology enablers occurred when the ADTAC and its supporting group

of IT Directors established a common set of categories to frame specific targets and metrics in order to facilitate a scorecard approach to the plan. Those categories are defined as follows:

- Internal Process (Operational Excellence)
- Customer (User Orientation)
- Financial (Business Contribution)
- Learning and Growth (Future Orientation)

The idea is that as programs are implemented, they can be transparently reviewed for progress based on their particular category. For example, a financially based objective would be measured for its effectiveness in cost avoidance or savings. The specific objectives, targets and metrics are detailed later in the document.

Bridging the Gap with Supporting IT Initiatives

The state's goal for the strategic planning process was a set of IT-centric initiatives that supported the state and agency business goals and that could be translated directly into a recommendation of IT projects. To accomplish this, four work groups were established for each of the four capabilities areas – collaboration, service delivery, business intelligence and education and training. These work groups consisted of agency IT Directors, key IT personnel and key program personnel. The specific initiatives are detailed later in the document.

From Vision to Action

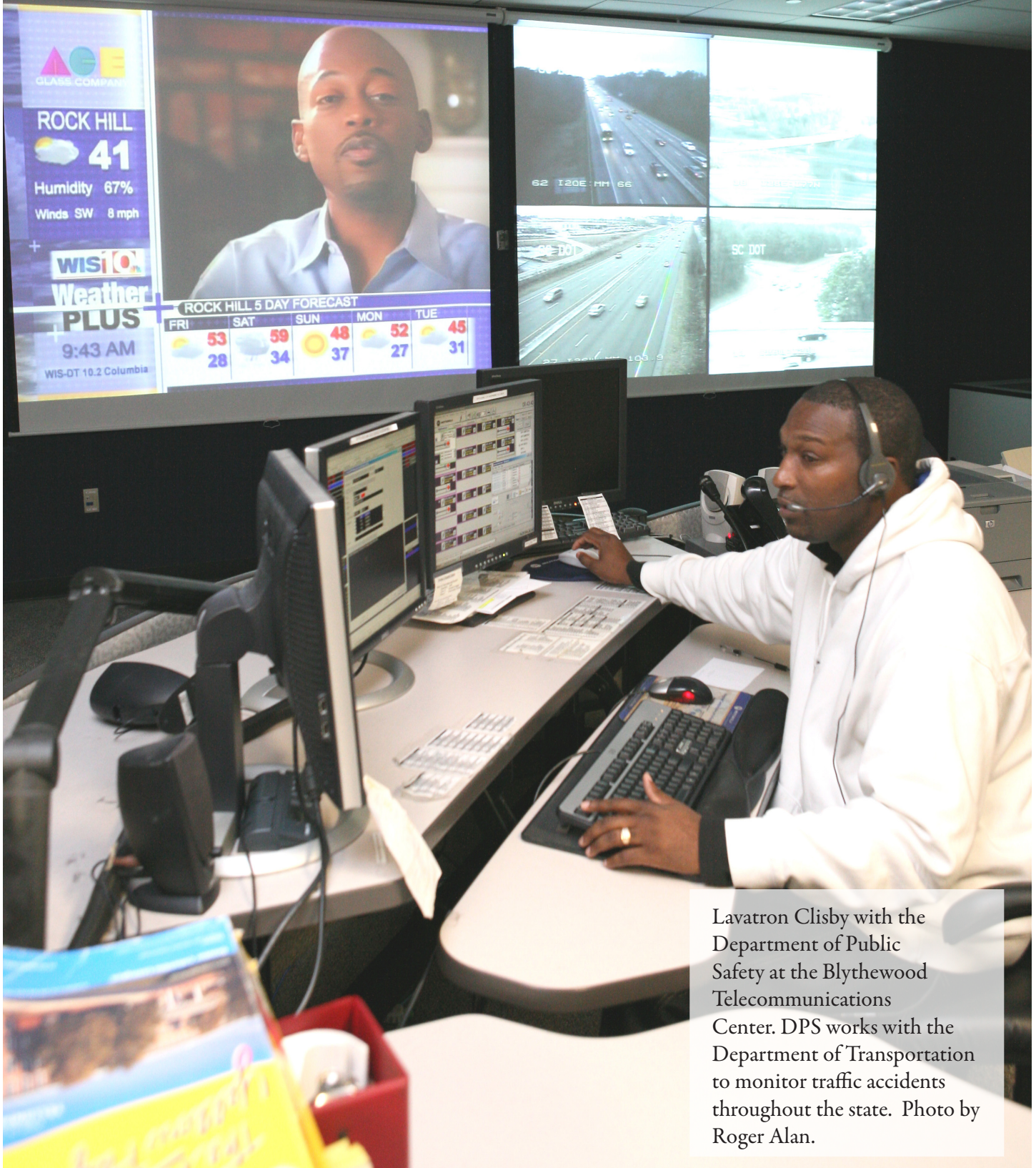
The state's approach – developing output for the framework – was designed to facilitate meaningful discussion and to move quickly toward decisions in a collaborative fashion that fostered consensus and a unified direction. The Statewide Strategic IT Plan is recommended as a long-term roadmap designed for the state by its own government agencies. It is a collaborative effort developed by following a transparent process. Supported initiatives will be implemented in the same fashion - to promote the common guiding values of:

- Commitment to citizen service
- Efficiency through collaboration
- Planning based on trusted analysis and shared information
- Growth of citizen and employee knowledge and ability

Following are the specific actionable IT initiatives, along with their measurable objectives, for each of the technology-enabled capabilities areas: collaboration, service delivery, business intelligence, and education and training.

Collaboration

Operate an efficient and effective government based on high levels of trust, functional standardization, common technical services, and shared information.



Lavatron Clisby with the Department of Public Safety at the Blythewood Telecommunications Center. DPS works with the Department of Transportation to monitor traffic accidents throughout the state. Photo by Roger Alan.

Collaboration|

Objectives and Current Status

This capability is intended to enhance existing multi-agency efforts, identify more encompassing solutions, and create opportunities for agencies to integrate technology plans that will take advantage of economies of scale while delivering an improved customer experience. Collaboration will allow enterprise solutions to take advantage of flexible technologies and be scaled to meet the evolving business needs of the State of South Carolina and the service expectations of its citizens. This will allow an increase in cross-agency knowledge, streamlined identification and implementation of future statewide solutions, lower overall cost and enhanced efficiency, which will positively impact the quality and speed with which service is delivered to customers.

Collaboration Objectives

- Promote productivity, efficiency and increased standardization.
- Improve efficiency by identifying and adjusting supporting technology.
- Promote productivity through interagency business process improvement.
- Expand participation in the development and governance of statewide business and technology solutions.
- Define the distinct roles of IT planning and procurement to be meaningful, collaborative, and priority driven.
- Leverage public/private partnerships in attempts to expand solution capabilities and service quality, reduce overall cost and integrate government and commercial best practices.
- Promote shared facilities, staff, infrastructure and intellectual property between agencies.
- Nurture a holistic approach to information sharing, education and training and the identification of shared resources across multiple agencies.

Current Collaboration Initiatives

The following existing collaboration initiatives have been identified as successful programs that should be leveraged and expanded:

South Carolina Enterprise Information System

The South Carolina Enterprise Information System (SCEIS) will consolidate more than 70 state agencies onto a single enterprise-wide system for accounting, purchasing and human resources, the “back-office” work common to every business, whether public-sector or private.

The SCEIS system is expected to achieve significant efficiencies, partly through reduction in the need to replace and maintain multiple, outdated, agency-specific computer systems, elimination of redundant work efforts and reduction in paper handling and storage. The efficiencies also will come through streamlined processes. SCEIS will enable agencies to provide the citizens of South Carolina with better service at reduced cost.

Collaboration

Proposed Initiatives

Proposed Collaboration Initiatives

The following collaboration initiatives have been identified as new projects that should be supported:

Enterprise Architecture (EA)

Enterprise Architecture as related to information technology provides a strategic planning framework that aligns information technology with the business functions it supports. The South Carolina Enterprise Architecture (SCEA) is a body of guidelines and standards developed as the result of a statewide effort to ensure the state's citizens receive the greatest possible value from investments in information technology. Enhancing these efforts into a comprehensive statewide enterprise architecture program with up-to-date documentation, technology diagrams and descriptions, and planning artifacts will make it easier for each agency to understand the designs and technologies being used by all other agencies. This will allow more shared solutions, resources and infrastructure and help to eliminate redundancies. Increasing the number of statewide platforms and solutions will reduce overall cost and allow agencies to spend more time on mission areas and agency-specific technology needs, and enable customers the ability to navigate government services more easily.

A focused Enterprise Architecture team implementing a coordinated program for all agencies will take ownership of the work to ensure progress is being made, information is being leveraged, and critical considerations such as security are being properly addressed in a consistent manner to the benefit of the state and its citizens.

Shared Service and Facilities

Some agencies have facilities in the same building or in close proximity, each with its own staff, utility usage, and technology infrastructure. Identifying common needs and similar service provisions will enable agencies to contribute to the "greening" of the state by reducing electrical consumption and enhancing cross-agency knowledge and communication. The potential to reallocate funds toward core mission areas and business goals rather than to costs such as water, electricity, and building maintenance preserves the state's natural resources and enhances the communities in which we live.

Statewide IT Planning Team

Progressive collaboration and business process improvement can occur either as a part-time activity or as a dedicated full-time program. To enhance results and reduce costs, smaller, dedicated teams made up of proper skill sets should be formed

to drive improvement plans for architecture mapping, business process re-engineering, and follow-on programs. This will create a sense of accountability and allow agencies to remain focused on their individual missions while collaborating on statewide initiatives as knowledge experts. This will also be a critical step in the identification of Centers of Excellence throughout the state.

Project Management

There should be an effort to refocus the enterprise PMO charter based on agency needs, including review of certification mechanism, reusable toolkit, and portfolio management function. Project management, as redefined by the Information Technology Solutions Committee (ITSC), represents an opportunity for collaboration that promotes cost efficiency and process effectiveness on a statewide scale. Project management may also act as a mechanism to identify and promote Centers of Excellence.

Procurement

Procurement is an obvious candidate for successful collaboration in the State of South Carolina. In addition to ensuring the fair and legal acquisition of products and services, the procurement process could promote collaboration through transparency. Collaborative procurement would also allow agencies to realize economies of scale. As with other collaborative functions, procurement may be empowered to identify and promote Centers of Excellence in South Carolina.

Service Delivery

Provide a multi-channel suite of government services that are accessible, responsive, secure, and affordable with a trail of accountability.



Department of Health and Environmental Control's Bureau of Laboratories staff members perform tests to protect the health of the public and the environment. Photo by Deborah Farr.

Service Delivery | Objectives and Current Status

This capability was identified by the state to take advantage of collaborative efforts across and within agencies to enhance how South Carolina delivers services to its citizens. Technology should take advantage of online web capability and support interactive voice response (IVR) and operator knowledge to provide service over the telephone. It should also enable in-person interaction so citizens can obtain current information for all their needs by visiting one location or agency, while government employees can provide information across the range of services regardless of which agency provides them. Through business process workflow and customer relationship management approaches, South Carolina will begin to automate, reduce paperwork, respond efficiently and quickly to information requests, and deliver more proactive services to its citizens regardless of the request channel: in-person, by phone or online. Coordinating service delivery across agencies enhances self-service, reduces costs, and enables shared processes with fewer disparate systems and duplicative efforts.

Service Delivery Objectives

- Review shared processes and identify opportunities to enhance service delivery of related processes.
- Improve model for offering and adopting technology shared services.
- Increase consistency and efficiency of service support within and across state agencies.
- Enhance customer experience with government services by reducing interactions and increasing convenience.
- Improve accessibility and enhance self-service for customers, as citizens and as employees.
- Explore public / private partnership potential for identified services.
- Increase the use of telecommuting and enhance the productivity of mobile workers.
- Identify existing and promote new Centers of Excellence related to shared services.

commitment to reducing red tape and ensuring more simplicity for the complicated and time-consuming tasks necessary to open a business. The site provides an electronic “one-stop shop” for South Carolina businesses (especially smaller businesses with fewer hours and less travel time and manpower to spare) to register and obtain permits and licensing.

In addition to registration, licensing, and renewals, the SCBOS site serves as a primary source of information and resources for entrepreneurs seeking guidance in opening a business in South Carolina. The number of partners involved in the SCBOS endeavor speaks to the importance of the project; the quality, power, and dependability of the end product; the commitment to increasing productivity; and the sincere desire to provide an environment that helps business grow and prosper in the state.

Electronic Benefits Transfer (EBT)

South Carolina and JPMorgan Chase & Co. have partnered to provide controlled payments and debit cards to citizens through EBT. EBT Cards are already used by the South Carolina Department of Social Services to provide money for the purchase of food to eligible citizens. There are plans to expand their use for payments to child care providers.

Debit cards, which do not restrict the use of funds provided to citizens, are used to provide Adoption and Foster Care payments. Future plans include using them for Temporary Assistance to Needy Families (TANF).

The JPMorgan partnership is an example of how public and private entities can work together to increase productivity, accuracy and efficiency, reduce fraud, waste, and cost, and provide government services more quickly to citizens in need. The partnership is open to all South Carolina government agencies, and program expansion is being considered for unemployment payments, child support payments, and state payroll.

Current Service Delivery Initiatives

The following existing service delivery initiatives have been identified as successful programs that should be leveraged and expanded:

South Carolina Business One-Stop (SCBOS)

The SCBOS web site is a collaboration between several state and federal agencies and private entities that have a

Service Delivery | Proposed Initiatives

Proposed Service Delivery Initiatives

The following service delivery program areas and initiatives have been identified as new projects that should be supported:

Division of State Information Technology (DSIT)

The Division of State Information Technology supports agency technology needs and will enhance operations to serve as a collaborative partner in providing cost effective services. DSIT will revise its organizational structure and functions to provide a service menu, provide transparency to agencies for the cost of services, and, as requested, support state initiatives for the agencies.

DSIT will ensure that the state's IT infrastructure is stable, secure and well-governed, and provide agencies with the services they need and expect. Leveraging best practice frameworks for infrastructure management, service delivery, data and application hosting, and foundational services will enable agencies to focus their resources on core mission areas and rely on DSIT for services that can be shared and managed from a common functional service center.

DSIT helps to coordinate SC.gov, South Carolina's Official State Portal, which provides information and web-based services to state agencies and citizens. SC.gov is a private partner that is directed by the e-government oversight committee, which is composed of state agency directors and IT directors. The SC.gov portal provides a cost-free option for all state and local agencies to host content and deliver services through a common portal. SC.gov will continue to provide a platform for collaboration and future growth as defined by state agencies and the citizens of South Carolina.

DSIT Services

DSIT facilitates the delivery of government services in South Carolina by coordinating enterprise technology investment and providing information technology solutions. More specifically, DSIT utilizing agency input:

- Manages agencies' IT infrastructure — data center, network and telecommunications services and security.
- Establishes policies, standards and guidelines for state IT.
- Promotes an enterprise approach to state IT.
- Develops and manages the state portal, SC.gov, currently coordinated by DSIT through a collaborative public/private partnership with South Carolina Interactive.

As part of the state's strategic IT plan, DSIT will facilitate the development of new statewide IT efficiencies and define and

deliver new services. This will include:

Customer Service Center Review – Many cities across the country have begun to consolidate service centers, similar to 911, for emergency response. The 311 Customer Interaction and Service Centers approach will be explored by South Carolina through several related projects: identification of existing service center capabilities, including technology and facilities; an examination of existing plans for modernizing the Interactive Voice Response (IVR) system; exploration of customer relationship management functionality and technology as it relates to recipients of government services; and data and system integration plans to share information and reduce discrepancies across multiple channels. The goal is to provide citizens a fast, efficient, informative mechanism for interacting with government and a method for government to provide services in a streamlined, cost effective manner, while enhancing opportunities and career potential for government employees.

Telecommuting and Mobile Workers – With the capability to telecommute from home or alternate locations and accomplish tasks near or in real-time while conducting state business, South Carolina can increase productivity, reduce travel cost and commuting-related pollution, and reduce the time it takes between determining eligibility and distributing benefits. Enhancing the approaches to telecommuting and mobile work already in place across agencies into a comprehensive program based on common technologies will enable a more flexible, scalable and cost-effective solution that many more agencies can use to reduce data duplication and commuting hours and increase first time response and satisfaction rates.

Establish Centers of Excellence (CoE) – Tremendous cross-agency capabilities are already in place, both functional and technical, such as licensing, document management, and security. With a CoE approach, areas of expertise and knowledge will be identified and a model for information sharing, capability hosting and enhancement, and operational guidance formalized. CoEs can be virtual, such as a select group of agencies responding to knowledge requests, or they can be housed in a single leading agency on which others rely to host their applications, assist them with standing up their own solutions, or provide resource support when needed to achieve milestones. South Carolina will explore and identify Centers of Excellence related to business process re-engineering and management, application development, and virtualization; and help drive standards and re-use of technology related to areas including storage management and business continuity.

Business Intelligence

Enable state and regional planning based on root cause and trend analysis, and enable predictive capabilities, allowing programs to be designed, evaluated, and measured within a trusted and shared information environment.



Stephanie Duncan with the Office of Human Resources uses the State Library's computer lab to facilitate training. Photo by Roger Alan.

Business Intelligence

Objectives and Current Status

In the technology age, information is readily available, but the maximum utilization lies in the ability to understand and analyze the information to enable informed decision making. Predictive capabilities, based on trends, patterns and links between agencies can be leveraged to increase program efficiency and cost effectiveness. With such an enabling competence, long-term sustainable strategies can be developed and continuous improvement methods applied, helping information users create new programs for the benefit of the citizens of South Carolina.

Business Intelligence Objectives

- Enable predictive capability for evaluating program effectiveness and cost efficiency.
- Improve statewide program planning by developing a common set of prioritized business and technical user needs.
- Enhance program planning by integrating a Business Intelligence Program, Geographic Information Systems (GIS), and geospatial processing.
- Reduce or eliminate data redundancy.
- Identify centralized Business Intelligence service center(s).

Current Business Intelligence Initiatives

The following business intelligence (BI) initiatives have demonstrated success and should be leveraged and expanded:

Office of Research and Statistics (ORS)

The Office of Research and Statistics (ORS), a neutral service entity, became a central setting to house data and to link citizens and agencies across multiple service providers. ORS began its work with a limited number of agencies, private providers and nonprofit organizations.

The vision of the agencies and organizations served by ORS helped propel the expanded version that exists today. They recognized the need for program evaluation and outcomes that encompass information from other systems. The need to better understand disparities that exist in health, education, law enforcement and social services also was a driving force to integrate data from these systems.

In compliance with a series of statutes and agreements, agencies and organizations entrust their data systems to the ORS while retaining control of their own data at all times. The ORS developed a series of algorithms using various combinations of personal identifiers to create its own unique identifier, enabling

statistical staff to link across multiple providers and settings while protecting confidentiality of the client. Requests to link data must be approved by all participating agencies and organizations.

Department of Education Data Integration

The South Carolina Department of Education (SDE) collects data from various sources to support decision making and innovation and to promote decision making and innovation by school districts and other constituencies. Data comes from student information systems, assessment results, food service systems, special education databases, health management systems, teacher certification and staff development applications, federal datasets, and many other sources. SDE is building a data warehouse in which educational data from many sources are stored and integrated. Educational data is used for accountability purposes, measuring student achievement, assessment of instructional programs, determining the direction of academic interventions, direction in providing services and support to schools and districts, identifying new directions to support teaching and learning, and providing facts to support the efforts of everyone involved in the educational process.

The SDE Data Decisioning System is an example of how information from multiple systems can be brought together to enable process-oriented decisions. With more programs like SDE data integration, coupled with the integrated approach of ORS and related technologies and disciplines like GIS, South Carolina is poised to develop a cross-functional, process-driven business intelligence system populated with real-time data available for citizen-centric decision making.

SCGIS Coordination Council

In 2006, a Memorandum of Agreement was signed by eight state agencies (BCB, DOC, Forestry, DHEC, DNR, DOR, DOT & PPP) to establish a Geographic Information Systems (GIS) Coordination Council for the State of South Carolina. The purpose of the Council is to coordinate GIS activities in the state better, including spatial data collection and management, standards development and data and information sharing. The Council also serves as the formal body to develop operational strategies and policies for GIS implementation among cooperating agencies in South Carolina.

In July 2007, a GIS Coordinator was hired to carry out the GIS coordination duties defined by the Council. Primary among these is to serve as the liaison between state agencies represented on the Council and also between the Council and county, local and municipal governments

Business Intelligence

Proposed Initiatives

and private sector organizations. The GIS council is an excellent representation of how progress can be made in a collaborative manner when a focused program is established and staffed appropriately.

Proposed Business Intelligence Initiatives

The following business intelligence initiatives have been identified as new projects that should be supported:

Establish and Staff a Business Intelligence Coordination Office

With multiple business intelligence capabilities found across the government and numerous private, nonprofit, and association entities, the realm of business intelligence can be vast. Establishing a coordinating council or program office will drive a focused statewide program into maturity, where participants can readily share information, leverage tools and existing knowledge, and promote more comprehensive and meaningful initiatives that affect larger groups of the population. The goal of enabling predictive capability will be realized when agencies combine their collective talent and experiences into a centralized and shared administration and implementation center.

Initiate A Phased State BI Program, Based on User Needs Assessment

Cost is a concern in any large-scale program. Scheduling implementation in phases over a longer time period means investment dollars and resources can be planned for well in advance, program direction adjusted easily to fit user needs, and results brought to market quickly with expected results. Steps for creating South Carolina's inclusive BI program would include:

- Inventory existing data structures and content and determine additional data needs.
- Inventory existing tools and applications and determine additional needs.
- Review existing business rules, processes, outcomes, and measures and determine additional needs.
- Identify process input and output, and existing data sharing and access strategies between agencies.
- Define program scope, along with an implementation and operation approach.
- Design conceptual system using agile/prototype approach.
- Transition to implementation.

Education and Training

Enable an environment with the disposition of improving knowledge, skills, and abilities [KSA] of citizens and employees.



Education and Training

Objectives and Current Status

The Education and Training capability is intended to develop a more coordinated approach to professional development for state employees and enhance citizens' ability to increase their own employment and quality of life opportunities. Many mechanisms for obtaining education, training and information currently exist in South Carolina. However accessing the right information, training or education can be confusing due to difficulties in knowing where to find the most effective solution.

Customers don't know where to look for information or how to access the most appropriate developmental strategy for their needs.

Developing a coordinated approach to managing knowledge and distributing information will improve accessibility and help customers find the right answers to their questions and learn about a particular topic.

In addition, developing a coordinated approach to education and development will reduce duplication, and, through Centers of Excellence, encourage the use of benchmark standards. Customers will have better access to higher quality education and development plus educational resources that meet their individual learning needs.

Education and Training Objectives

- Establish a customer/citizen centric knowledge, skills, and abilities (KSA) environment across delivery channels [online, written, case worker, government office].
- Enhance employee education and training, and meet professional development needs.
- Provide affordable, accessible, shared infrastructure to nurture, support and enable statewide delivery of educational content and services.
- Offer a portfolio of services and tools based on Centers of Excellence to satisfy the diversity of learning styles and needs.
- Enhance program efficiency through coordination of activity between related groups and initiatives.

Current Education and Training Initiatives

The following existing education and training initiatives have been identified as successful programs that should be leveraged and expanded:

Education and Economic Development Act (EEDA) Project

Established May 27, 2005, by the Education and Economic Development Act (EEDA), "Personal Pathways to Success" is a program designed to better prepare South Carolina students for the workforce and post-high school education through early career planning and an individualized curriculum. To effectively implement Personal Pathways to Success, the EEDA mandates a variety of supporting initiatives, including:

- **High Schools That Work** – The High Schools That Work model provides a closely monitored framework of goals and key practices to accelerate learning, including rigorous academic standards and out-of-classroom learning opportunities.
- **Regional Education Centers** – These regional centers will provide career planning services for students and adults, professional development for educators, and workforce education programs.
- **Individual Attention for Students** – High schools are mandated to hire more guidance counselors to achieve a ratio of one counselor for every three-hundred students, and counselors specializing in career guidance will help students plan their education 100%.
- **Protection Against Tracking** – EEDA includes provisions that protect students against being steered into pathways that do not fit their best interests.

Office of Human Resources (OHR)

The South Carolina Office of Human Resources (OHR) partners with customers in applying human resources' best practices and training innovations to manage the human intellectual capital of South Carolina state government. With a three-year strategic plan, OHR is involved with technology initiatives designed to create efficiencies; including implementing an e-recruitment system, a learning management system with tracking, and enabling electronic storage of HR related documents. Providing real time access to information, paperless requests, and web-based registration are part of the long term plan.

With long term focused programs like EEDA and OHR, a collaborative and focused education and training initiative can make extensive progress on aligning programs with agency and citizen needs. With a goal of identifying what already exists and enabling easy to find, easy to access content development, distribution and tracking, the education and tracking program will enhance the great work accomplished and planned across agencies, technical colleges and higher education.

Education and Training

Proposed Initiatives

Proposed Education and Training Initiatives

The following education and training initiatives have been identified as new projects that should be supported:

Establishment of an Education and Training Coordinating Program/Office

Facilitating interoperability and information sharing, as well as implementing identified activities will be essential to promote coordination. Establishing a dedicated core team to focus effort will increase the chances of success and provide overall cost efficiency while eliminating duplication. The coordinating program/office will:

- Collect existing inventory of public physical and virtual resources and access mechanisms.
- Collect existing inventory related to content and curriculum development.
- Collect existing inventory of delivery mechanisms.
- Collect and prioritize employee needs based on regulation, risk, and workforce planning.
- Coordinate user experience assessments to identify and prioritize improvements to education and training services provided by state agencies.
- Identify Centers of Excellence related to knowledge, skills, and abilities and education delivery.
- Establish a coordinated structure for developing, distributing and tracking content for employees and customers based on need assessments and inventories.

Establish a Communications and Marketing Function

For a comprehensive program to achieve heightened success measured by levels of participation, it will be essential to promote the program and communicate its benefits. A proactive marketing function will:

- Assure customers know programs and information exist and how and where to obtain access.
- Assure all agencies know which mechanisms are in place to develop, distribute and track programs and information.
- Coordinate with other education related initiatives such as Education and Economic Development Act (EEDA) to identify areas of collaboration.
- Conduct user assessments to assure user satisfaction and program quality.

Appendix A

Proviso 70.28 of the FY 2008-2009
Appropriations Act

(LEG: Joint Strategic Technology Committee) There is created a joint committee of the General Assembly to be known as the Joint Strategic Technology Committee consisting of eight members. The Chairman of the Senate Finance Committee shall appoint four members, at least two of whom must be appointed from the Senate Finance Committee. The Chairman of the House Ways and Means Committee shall appoint four members, at least two of whom must be appointed from the House Ways and Means Committee.

The Joint Strategic Technology Committee shall have the following purposes and responsibilities:

1. The joint committee shall review the Statewide Strategic Information Technology Plan prepared by the Budget and Control Board and the Agency Directors Technology Advisory Committee and make recommendations to the Senate Finance Committee and the House Ways and Means Committee regarding the plan by January 29, 2009. The joint committee shall also recommend priorities for state government enterprise information technology projects and resource requirements beginning in the Fiscal Year 2009-10 budget cycle;
2. The joint committee shall conduct a comprehensive review of all statutes relating to the management and use of information technology by state government, review state government information technology policies,

and determine methods to foster collaboration among state government users of information technology and between state government and the private sector through the creation of advisory committees. Further, the joint committee shall recommend to the President Pro Tempore of the Senate and the Speaker of the House of Representatives, for referral to the appropriate standing committees, any statutory changes appropriate for the successful implementation of the Statewide Strategic Information Technology Plan and the management and use of information technology by state government.

The Budget and Control Board and all state agencies shall cooperate with and provide assistance to the Joint Strategic Technology Committee as requested by the committee. The Executive Director of the State Budget and Control Board shall appoint an Agency Directors Technology Advisory Committee. The Executive Director shall determine the number and composition of this committee, which shall represent a cross-section of state government agencies. This committee shall provide input and advice regarding the Statewide Strategic Information Technology Plan being developed by the State through the Budget and Control Board. The committee shall also assist and advise the Joint Strategic Technology Committee at its request.